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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,969	04/04/2001	Li-Wen Chen	52719.00017	5421
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MetaEdge Corporation 5201 Great America Parkway Suite 238 Santa Clara, CA 95054		EXAMINER EHICHIOYA, FRED I		
		ART UNIT 2162 PAPER NUMBER		

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/827,969	Applicant(s) CHEN ET AL.	
	Examiner Fred I. Ehichioya	Art Unit 2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 8, 10 - 17, 20 - 35, and 46 - 50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 8, 10 - 17, 20 - 35, and 46 - 50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) <u>0</u> | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: RCE and Preliminary amendments, both filed September 24, 2004 to the original application filed April 4, 2001.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 24, 2004 has been entered.

Response to Arguments

3. Applicants arguments, with respect to claims 1 – 8, 10 – 17, 20 – 35 and 46 - 50 filed September 24, 2004 have been fully considered but they are not persuasive for the following reasons.

Applicants argue: "Kingberg fails to disclose a derived subject model that provides modeling data and a concept centric model that enables concept centric processing" (page 13, paragraph 1).

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Regarding applicants' argument: Examiner respectfully disagrees with the applicant because this claim limitation is not defined in the specification and therefore the rejection is based on **35 USC § 112** as discussed below.

Applicants further support the contention that "a derived subject model that provides modeling data and a concept centric model that enables concept centric processing" is defines in the specification on page 10 lines 4 through 14 by quoting the followings:

"Accordingly, the derived subject model 301 comprises a customer entity 302. Static attributes are represented by a customer demographics entity 303, which comprises demographics information for each customer in customer entity 302, and a customer geographic entity 304, which comprises geographical information about each customer in customer entity 302. A purchase transaction entity 305 comprises merchant purchase transaction data, such as a time, a date; an amount, a description, and so forth, for a plurality of purchase transactions entered into by customers in customer entity 302. A return transaction entity 306 comprises merchant return transaction data, such as a time, a date, and a returning item, and so forth, for a plurality of return transactions entered into by customers in customer entity 302".

Examiner wishes to categorically state that "a derived subject model that provides modeling data and a concept centric model that enables concept centric processing" is not defined on the above-cited page and lines or any other part of the specification.

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4. Examiner respectfully disagrees with all of the allegations as argued.

Examiner in his previous office action pointed out the exact locations in the cited prior art. In view of the above, the examiner contends that all limitations as recited in the claims have been addressed in this Office Action. For the above reasons, Examiner believed that rejection of the last Office action was proper.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 10, 20 and 28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. There is no mention as to "first concept centric subject model" or "concept centric model that enables concept centric processing", and therefore is not enabling to one of ordinary skill in the art.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 10, 20 and 28 are rejected under 35 U.S.C 112, second

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paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 1, 10, 20 and 28, the term "first concept centric subject model" in claims 1, 10, 20 and 28 is relative which renders the claim indefinite. The term "first concept centric subject model" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Regarding claims 1 – 8, 46 and 47, these claims depend from claim 1, claims 11 – 17 and 48 depend from claim 10, claims 21 – 27 and 49 depend from claim 20 and claims 29 – 35 and 50 depend from claim 28; therefore inherit their deficiencies respectively.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 - 4, 7, 8, 10 -13, 16, 17, 20 - 23, 26 – 31, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,734,887 issues to Denis G. Kingberg et al (hereinafter "Kingberg") in view of U.S. Patent 5,713,014 issued to Kevin Durflinger et al (hereinafter "Durflinger").

Regarding claim 1, Kingberg teaches modeling a first plurality of information entities, including a first entity and a second entity, using a first logical model (see FIG.4, column 5, lines 40 – 41, and column 6, lines 40 – 59 and column 6, lines 41 - 54);

converting said first derived subject model into a first physical model (see column 18, lines 37 – 62); and

mapping at least one relationship between said first entity and said second entity of said first plurality of information entities based upon said first physical model (see FIG.4, column 6, lines 59 – 67 and column 7, lines 1 – 9).

Kingberg does not explicitly teach converting said logical model into a first concept centric subject model (derived subject model).

Durflinger teaches converting said logical model into a first concept centric subject model (derived subject model) (see Figs. 8, 9 and column 8, lines 15 – 23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kingberg with the teaching of Durflinger to produce DBMS that supports application programs interfaces which can present to its users a variety of logical models using industry-standard interfaces, while the physical storage of data is managed in manner that closely follows the data model. The advantage is that this system stores complex data according to entity-relationship data model wherein only related data objects are stored for each set relationship.

Claims 10 is essentially the same as claim 1 except that it sets forth the claimed invention as a computer product rather than a method for managing information and therefore rejected for the same reasons as applied hereinabove.

Regarding claims 2, 11, 21 and 29, Kingberg teaches first logical model comprising at least one of a central concept entity, a static attribute entity, a

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dynamic attribute entity, an activities/events entity (see column 19, lines 60 – 67 and column 20, lines 1 – 23).

Regarding claims 3, 12, 22 and 30, Kingberg teaches said first derived subject model comprising at least one of a core component, and at least one of a plurality of customized group components (see column 6, lines 57 – 65).

Regarding claims 4, 13, 23 and 31, Kingberg teaches analyzing said first plurality of information entities using applications based upon input of said first logical model (see column 6, lines 44 – 49 and column 20, lines 26 – 32).

Regarding claims 7, 16, 26 and 34, Kingberg teaches modeling a second plurality of information entities, including a first entity and a second entity, using a second logical model (see column 7, lines 32 – 40, column 20, lines 42 – 45 and column 29, lines 20 – 30);

converting said second logical model into a second derived subject model (column 7, lines 40 – 43 and column 20, lines 53 – 57);

converting said second derived subject model into a second physical model (see column 7, lines 47 – 49); and

mapping at least one relationship among said first entity and said second entity of said second plurality of information entities based upon said second physical model (see column 7, lines 53 – 55).

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Regarding claims 8, 17, 27 and 35, Kingberg teaches analyzing said first plurality of information entities and said second plurality of information entities using applications based upon input from said first logical model and said second logical model, said applications deriving new relationships between said first plurality of information entities and said second plurality of information entities (see FIG.4, column 6, lines 40 – 59, column 7, lines 32 – 55 and column 20, lines 26 – 32).

Regarding claim 20, Kingberg teaches a processor (see column 29, line 24); and

a memory (see column 29, lines 25 – 28);

wherein said processor is operative to model a first plurality of information entities, including a first entity and a second entity, using a first logical model (see FIG.4, column 5, lines 40 – 41, and column 6, lines 40 – 59 and column 6, lines 41 - 54); and to convert said first derived subject model into a first physical model (see column 18, lines 37 – 62); and thereupon to map at least one relationship between said first entity and said second entity of said first plurality of information entities based upon said first physical model (see FIG.4, column 6, lines 59 – 67 and column 7, lines 1 – 9); wherein said first entity and said second entity are stored in said memory (see FIG.4; column 6, lines 40 – 67, column 7, lines 1 – 9, column 18, 43 – 46, lines 60 – 62 and column 29, line 24).

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Kingberg does not explicitly teach said processor is further operative to convert said logical model into a first concept centric subject model (derived subject model).

Durflinger teaches said processor is further operative to convert said logical model into a first concept centric subject model (derived subject model) (see Figs. 8, 9 and column 8, lines 15 – 23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kingberg with the teaching of Durflinger to produce DBMS that supports application programs interfaces which can present to its users a variety of logical models using industry-standard interfaces, while the physical storage of data is managed in manner that closely follows the data model. The advantage is that this system stores complex data according to entity-relationship data model wherein only related data objects are stored for each set relationship.

Regarding claim 28, Kingberg teaches a processor (see column 29, line 24);

a memory (see column 29, lines 25 – 28); and

a display; wherein said processor causes said display (see column 29, line 24 and lines 29 – 30) to:

display a first logical model, said first logical model modeling a first

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plurality of information entities, including a first entity and a second entity (see FIG.4, FIG.8A – 8C and column 6, lines 40 – 59);

display a first physical model, said first physical model obtained from said first derived subject model; wherein at least one relationship between said first entity and said second entity of said first plurality of information entities exists based upon said first physical model (see FIG.4, column 60 – 67 and column 20, lines 1 – 20).

Kingberg does not explicitly teach display a first concept centric subject model (derived subject model), said first derived subject model obtained from said logical model.

Durflinger teaches display a first concept centric subject model (derived subject model), said first derived subject model obtained from said logical model (see Figs. 8, 9 and column 8, lines 15 – 23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kingberg with the teaching of Durflinger to produce DBMS that supports application programs interfaces which can present to its users a variety of logical models using industry-standard interfaces, while the physical storage of data is managed in manner that closely follows the data model. The advantage is that this system stores complex data according to entity-relationship data model wherein only related data objects are stored for each set relationship.

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8. Claims 5, 14, 24 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingberg in view Durflinger and further in view of The OLAP COUNCIL, OLAP and OLAP Server Definitions, The OLAP Council, Copyright 1995 (hereinafter "OLAP").

Regarding claims 5, 14, 24 and 32, Kingberg or Durflinger does not explicitly teach said applications comprising at least one of statistics, a report generator, an On Line Analytical Processing (OLAP) package, and a data mining application.

OLAP teaches said applications comprising at least one of statistics, a report generator, an On Line Analytical Processing (OLAP) package, and a data mining application (see pages 1 – 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kingberg and Durflinger with the teaching of OLAP wherein users gain insight into the meaning contained in databases by using OLAP objective of multi-dimensional analysis. The motivation being that a multi-dimensional structure is arranged so that every data item is located and accessed based on the intersection of the dimension members which defined that item; OLAP functionality is characterized by dynamic multi-dimensional analysis of consolidated enterprise data supporting end user analytical and navigational activities.

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9. Claims 6, 15, 25, 33, 46, 47, 48, 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kingberg in view of Durflinger and further in view of U.S. Patent 6,490,590 issued to Ronald Fink (hereinafter "Fink").

Regarding Claims 6, 15, 25 and 33, Kingberg teaches said processor maps at least one relationship between said first entity and said second entity of said first plurality of information entities based upon said first physical model (column 7, lines 53 – 55).

Kingberg or Durflinger does not explicitly teach create metadata information for said models; and

save said metadata information in a repository.

Fink teaches create metadata information for said models (see FIG.3A step 302); and save said metadata information in a repository (see FIG.3A step 308).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kingberg and Durflinger with the teaching of Fink wherein metadata information in a repository is saved when said processor maps at least one relationship between said first entity and said second entity of said first plurality of information entities based upon said first physical model. The motivation being that as additional metadata is identified, object oriented utility routines to support the metadata are created and added to the set of predefined routines. The utility routines are for extracting, loading,

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cleansing, transforming, and house holding metadata in the database management system.

Regarding claim 46, Fink teaches retrieving metadata information from a repository (see column 2, lines 30 – 33, column 6, lines 7 – 10 and column 7, lines 4 – 7);

creating at least one of a plurality of commands based upon said metadata information (see column 4, lines 4 – 6 and column 6, lines 10 – 18);

sending said at least one of a plurality of commands to a database (see column 5, lines 20 – 22);

providing information received from said database responsive to said at least one of a plurality of commands to at least one of a plurality of applications (see column 4, lines 56 – 60 and column 5, lines 11 – 25); and

creating at least one of a plurality of reports from a result of said at least one of a plurality of applications (see column 5, lines 55 – 58 and column 8, lines 2 – 5).

Regarding claim 47, Fink teaches said metadata information comprises at least one of a model, a mapping, a derived attributes definition, and a profiling definition (see column 5, lines 46 – 61).

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Claims 48 is essentially the same as claim 46 except that it sets forth the claimed invention as a computer product rather than a method and therefore rejected for the same reasons as applied hereinabove.

Regarding claim 49, Fink teaches a processor (see column 3, lines 51 – 54); and

a memory (see column 3, lines 54 – 55);

wherein said processor is operative to retrieve metadata information from a repository (see column 6, lines 7 – 10); create at least one of a plurality of commands based upon said metadata information (see column 4, lines 4 – 6 and column 6, lines 10 – 18); send said at least one of a plurality of commands to a database (see column 5, lines 20 – 22); provide information received from said database responsive to said at least one of a plurality of commands to at least one of a plurality of applications (see column 5, lines 11 – 19); and create at least one of a plurality of reports from a result of said at least one of a plurality of applications (see column 8, lines 2 – 5).

Regarding claim 50, Fink teaches a processor (see column 3, lines 51 – 54);

a memory (see column 3, lines 54 – 55); and

a display; wherein said processor causes said display to display at least one of a plurality of reports from a result of at least one of a plurality of applications acting upon information received from a database responsive to at

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least one of a plurality of commands created based upon a metadata information retrieved from a repository (see column 4, lines 4 – 6, column 5, lines 11 – 22, column 6, lines 7 – 8 and column 8, lines 2 – 5).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred I. Ehichioya whose telephone number is 571-272-4034. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred I. Ehichioya
Patent Examiner
Art Unit 2162

November 5, 2004



SHAHID ALAM
PRIMARY EXAMINER